In the Claims:

Please cancel claims 1-6 and 8-12.

Please amend claim 7 to appear as follows:

7. An apparatus for communicating electrical data signals over power transmission lines, comprising:

a first coupler for coupling and de-coupling electrical data signals on a first power transmission line;

a first electro-optical transducer in communication with said first coupler and capable of converting electrical data signals to light signals and light signals to electrical data signals;

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a fiber optic communication medium having a first end communicatively coupled to said first transducer for communicating said light signals;

a second electro-optical transducer communicatively coupled to an opposite end of said fiber optic communication medium and capable of converting electrical data signals to light signals and light signals to electrical data signals; and

a second coupler in communication with said second transducer for coupling and de-coupling electrical data signals on a second power transmission line.

Please add the following claims 13-46:

13. A system for providing communications over an electric power system having a medium voltage power line, a plurality of customer power lines each extending to a customer residence, and a plurality of transformers coupling the medium voltage power line to the customer power lines, the system comprising:

a plurality of transformer bypass devices wherein each said transformer bypass device is communicatively coupled to the medium voltage power line and at least one customer power line to provide a data path bypassing one of said plurality of transformers; and

an aggregation device communicatively coupled to said plurality of transformer bypass devices via the medium voltage power line and forming a portion of a data path between the medium voltage power line and a point of presence.

14. The system of claim 13, wherein said aggregation device comprises:

a first modem communicatively coupled to the medium voltage power line; and

a first coupling device forming at least part of a data path between said first modem and the medium voltage power line, and wherein said first coupling device is comprised of a magnetically permeable toroid.

15. The system of claim 14, wherein said transformer bypass devices each comprise a second modem communicatively coupled to the medium voltage power line and a second coupling device forming at least part

of a data path between said second modem and the medium voltage power line, and wherein said second coupling device is comprised of a magnetically permeable toroid.

16. The system of claim 13, wherein said aggregation device is in communication with the point of presence, at least in part, via an optical fiber.

17. The system of claim 13, wherein said aggregation device is in communication with the point of presence, at least in part, via a wireless link.

18. The system of claim 13, wherein each of said first transformer bypass devices, comprise:

a first modem communicatively coupled to the plurality of customer power lines; and

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a second modem communicatively coupled to the medium voltage power line and said first modem.

19. The system of claim 18, wherein each of said transformer bypass devices further comprise:

a first coupling device forming at least part of a data path between said second modem and the medium voltage power line, and wherein said first coupling device is comprised of a magnetically permeable toroid.

20. The system of claim 19, wherein each of said transformer bypass devices further comprise a data router in communication with said first modem and said second modem.

21. The system of claim 19, wherein said aggregation device comprises:

a third modem communicatively coupled to the medium voltage power line and in communication with said second modem; and

a second coupling device forming at least part of a data path between said third modem and the medium voltage power line, wherein said first coupling device is comprised of a second magnetically permeable toroid.

22 The system of claim 21, wherein said second modem and said third modem communicate telephony data.

23. The system of claim 21, wherein said second modem and said third modem communicate using Orthogonal Frequency Division Multiplexing.

24. The system of claim 20, wherein said data router is configured to prioritize transmission of data received from the customer power lines.

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25. The system of claim 24, wherein said transformer bypass device communicates telephony data.

26. The system of claim 18, wherein said first modem communicates using Orthogonal Frequency Division Multiplexing.

27. The system of claim 20, wherein said transformer bypass device communicates Internet data.

28. The system of claim 20, wherein said transformer bypass device communicates video data.

29. A transformer bypass device providing a communication path around a transformer between a medium voltage power line and a communication device, comprising:

a first modem in communication with the communication device;

a second modem in communication with said first modem and communicatively coupled to the medium voltage power line; and

a coupling device forming at least part of a data path between said second modem and the medium voltage power line wherein said coupling device is comprised of a magnetically permeable toroid; and

a data router in communication with said first modem and said second modem configured to prioritize data packets received from the plurality of communication devices for transmission on the medium voltage power line, wherein said first modem is communicatively coupled to a plurality of low voltage power lines, and wherein said first modem is in communication with a plurality of communication devices via the plurality of low voltage power lines.

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30. The device of claim 29, further comprising a fiber optic isolation device disposed between said second modem and the medium voltage power line.

31. The device of claim 29, wherein said coupling device further comprises a winding communicatively coupled to said toroid.

32. The device of claim 29, wherein said second modem uses Orthogonal Frequency Division Multiplexing.

33. The device of claim 32, wherein said first modem uses Orthogonal Frequency Division Multiplexing.

34. The device of claim 29, wherein said first modem is a wireless modem for providing a communication link with the communication device that is at least partially wireless.

35. The device of claim 29, wherein said second modem uses Code Division Multiple Access.

36. The device of claim 29, wherein said first modem uses Orthogonal Frequency Division Multiplexing.

37. A communication device for providing data communications through a medium voltage power line, comprising:

a communication interface providing at least part of a communication path between the medium voltage power line and a point of presence;

a modem in communication with said communication interface and in communication with the medium voltage power line; and

a coupling device forming at least part of a data path between said modem and the medium voltage power line wherein said coupling device is comprised of a magnetically permeable toroid.

38. The device of claim 37, wherein said communication interface is a fiber optic interface.

39. The device of claim 37, wherein said communication interface is a wireless interface.

40. The device of claim 37, wherein said modem uses Orthogonal Frequency Division Multiplexing.

41. A transformer bypass device providing a data communication path between a first power line and communication device, comprising:

a first modem forming part of the data communication path;

a second modem in communication with said first modem, communicatively coupled to the second power line, and forming part of the data communication path; and

a coupling device forming at least part of the data communication path between said second modem and the second power line; and